

REMARKS

Claims 4-9 and 18-19 are pending. Favorable reconsideration is respectfully requested.

The present invention relates to a method for screening and for selecting antiparasitic agents, herbicides or combinations thereof, comprising

- incubating a substance to be tested with a monogalactosyldiacylglycerol synthase or with a plastidial membrane isolated from a plant,
- measuring the specific enzymatic activity, after said incubation; and
- selecting the substance that is able to inhibit the specific enzymatic activity of the monogalactosyldiacylglycerol synthase.

See Claim 4.

Thus, an important feature of the claimed method is that the substance that is able to inhibit the specific enzymatic activity of the monogalactosyldiacylglycerol synthase (hereinafter referred to as "MGDG") is selected. See the last two lines of Claim 4.

The rejection of Claims 4-9 under 35 U.S.C. §102(b) over Marechal et al. (Plant Lipid Metabolism, pp. 144-151, 1995 or Journal of Biological Chemistry, Vol. 269, pp. 5788-5798, 1994) is respectfully traversed.

Each Marechal et al. reference describes the function of MGDG synthase activity which was partially purified from spinach chloroplast envelope membranes. These studies demonstrated that MGDG synthase is capable of binding large portions of both substrates UDP-galactose and diacylglycerol in separate binding domains. In particular, Marechal et al. studied the pattern of inhibition of MGDG synthase activity by binding UDP or citraconic anhydride, which are well-known inhibitors of MGDG synthase, to test their ability to inhibit the binding of different substrates to MGDG synthase.

However, the references do not disclose such a method for screening or selecting anti-parasitic agents or herbicides, since the Inventors have shown in the present application for the first time that MGDG is vital to plant biogenesis and cell survival (see page 3, lines 34-39 of the present specification). Accordingly, without knowing the fact that it is possible to kill plants and apicomplexan parasites by inhibiting the MGDG synthase activity, the method recited in Claim 4 is not disclosed by Marechal et al. Accordingly, the claims are not anticipated by the cited references.

In addition, Applicants submit herewith an executed Rule 132 Declaration from Dr. Marechal, an Inventor in the present application. The Declaration shows the anti-parasitic and herbicide properties of two new inhibitors of MGDG synthase screened according to the method of the present invention.

In view of the foregoing, withdrawal of this ground of rejection is respectfully requested.

Applicants point out that one skilled in the art can test the activity of MGDG synthase on the basis of Marechal et al., J. Biol. Chem., 1994, 269, 5788-5798, as described in the specification at page 5, line 38 to page 6, line 3. In addition, the screening of new herbicides and anti-parasitic agents from a chemical library for example are known as described by Kenny et al., Prog. Drug Res., 1998, 51, 245-269. In addition, one skilled in the art can also evaluate the anti-parasitic or herbicide properties of the inhibitor compounds of MGDG synthase identified using the method as claimed using as described by Peng et al., Biochem. Pharmacol., 1995, 49, 105-113 or Szamosi et al., 1994, 106, 1257-1260. A copy of Kenny et al., Peng et al. and Szamosi et al. is provided in the Information Disclosure Statement submitted herewith.

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Reply to Office Action of August 24, 2004

The rejections of Claims 12-17 under 35 U.S.C. §102(b) and (e) as set forth in paragraphs 4 and 5 of the Official Action dated August 24, 2004 are believed to be obviated by the cancellation of those claims. Accordingly, withdraw of those grounds of rejection is respectfully requested.

The rejection of Claims 12-17 under 35 U.S.C. §112, first paragraph, is believed to be obviated by the cancellation of those claims. Accordingly, withdraw of this ground of rejection is respectfully requested.

The objection to the claims is believed to be obviated by the amendment submitted above. The abbreviation “MGDG” has been replaced with --monogalactosyldiacylglycerol--. Accordingly, withdrawal of this objection is respectfully requested.

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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